

(12) UK Patent Application

(19) GB (11) 2 215 524 (13) A

(43) Date of A publication 20.09.1989

(21) Application No 8901785.9

(22) Date of filing 27.01.1989

(30) Priority data

(31) 8802204

(32) 02.02.1988

(33) GB

(51) INT CL<sup>4</sup>  
H01Q 9/00

(52) UK CL (Edition J)  
H1Q QDX  
U1S S2139 S2204 S2212

(56) Documents cited  
None

(58) Field of search  
UK CL (Edition J) H1Q QAX QBX QDX  
INT CL<sup>4</sup> H01Q

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(54) Radio antenna

(57) Two synchronised fields, one electric and one magnetic, are created by two separate stimulating devices each of which is given half the final power of the radio wave synthesised by the geometric cross product of the said fields so as to form an intense Poynting vector which expands towards infinity, from the original small volume. Two vertical cylindrical electrodes 30 and 31 are fed with about half the transmitter power by feeder 32 through matching and isolating transformer 33 so as to cause a curved electric field as indicated by the E lines. The two horizontal circular plates 34 and 35 are separately fed by an appropriately phased voltage (causing the displacement current D') from feeder 36 via matching and isolating transformer 37 and the radio frequency displacement current produces a corresponding magnetic field H by reason of Maxwell's law  $D' = \nabla H$  which curves around the antenna crossing the said E lines so as to synthesise the Poynting vector.

